GDAS elevation correction on LCC ...

jonc 33 posts since

Sep 20, 2007 Dear LIS group,

Attached to this message are files of the rainfall forcing (and surface pressure forcing) for GDAS without and with elevation correction on my CONUS Lambert projection. As one can see, there is a major erroneous pixel along the New Jersey coast. I've seen another one off the coast of SE Massachusetts. I'm surprised to see that the rainfall forcing is being impacted by the elevation correction. Should this be happening?

As a result of these (and perhaps other) bad data points, I've seen the summary stats for NOAH go off the chart for rainforccing, and snow depth.

So, it looks like the GDAS elevation correction is not entirely working just yet.

Jonathan **Attachments:**

- rainf_28feb2007_gdas.jpg (213.2 K)
- rainf_28feb2007_gdas+elev-correct.jpg (184.4 K)
- rainf_28feb2007_gdas+elev-correct_clevs.jpg (209.7 K)
- psurf_28feb2007_gdas.jpg (201.3 K)
- psurf_28feb2007_gdas+elev.jpg (252.4 K)

Tags: lis, gdas, elevation, correction

sujay *118 posts since*
Sep 20, 2007 1. **Re: GDAS elevation correction on LCC projection: Problems identified** Aug 15, 2008 7:59 PM

Jon,

It is surprising that you are seeing errors in the rainfall fields. The lapse-rate correction is supposed to update temperature, humidity, LWdown and Pressure fields only. I will double check the code.

-S

jonc *33 posts since*
Sep 20, 2007 2. **Re: GDAS elevation correction on LCC projection: Problems identified** Aug 18, 2008 11:54 AM

Sujay,

It looks like I'm having more fundamental problems with LIS besides the GDAS elevation correction. I ran the 4-km CONUS domain without elevation correction to see what the NOAHstats would look like, and I'm getting NANs and Infinity in the stats output without the elevation correction, too. It seems like there is a runaway snow depth accompanying this problem.

I'm wondering about one of two things:

(1) The OS upgrade caused some problem, or

(2) The last update I did to LIS back on July 18th intoduced this problem. Unfortunately, I can't test the previous LIS I had built (which worked fine without elevation correction) because that was compiled on the previous OS with an obsolete compiler.

Any suggestions for testing at this point?

Jon